

REMARKS

Claims 1-7, 23, 25-27 and 32-34 are currently pending in the subject application and are presently under consideration. Claims 1, 7, and 34 have been amended as shown on pages 2-5 of the Reply. Claims 6 and 27 has been cancelled.

Favorable reconsideration of the subject patent application is respectfully requested in view of the comments and amendments herein.

II. Rejection of Claims 1-16, and 24 Under 35 U.S.C. §102(e)

Claims 1-7, 23, 25-27 and 32-34 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Dhindsa, *et al.* (US 5,740,016) in view of Saika (6,573,596) and Morris *et al.* (US 6,230,497). Withdrawal of this rejection is requested in view of at least the following. Dhindsa, *et al.* does not teach or suggest all aspects recited in the subject claims.

The claimed subject matter generally relates to regulating heat in an integrated circuit device, and in particular to removing generated heat from hot spot areas. To this end independent claims 1, 7 and 34 recite similar features namely: *A heat regulating device fabricated from a combination of various layers of silicon carbide and diamond for regulating a heat flow into and out of an integrated circuit semiconductor body comprising: a plurality of thermo-electrical structures that create a uniform temperature gradient across an integrated circuit semiconductor body via at least one of heat inducement to or dissipation of generated heat away from a portion of the integrated circuit semiconductor body; at least one layer of a conductive material in contact with the plurality of thermo electrical structures for conducting heat flow; and at least one of the plurality of the thermoelectric structures has a distribution of line patterns that is denser towards center of its structure and decreases in density towards outer limits of the structure wherein the at least one thermoelectric structure is coupled to an associated hot spot wherein each of the thermo-electrical structures has a structure of line patterns selected from a group comprising: helix structure and a spring structure.*. The cited art does not teach or suggest such claimed aspects.

Dhindsa, *et al.* relates to a solid state temperature controlled substrate support for maintaining a desired temperature distribution across a substrate during processing in

semiconductor equipment. Accordingly, it teaches a temperature controlled substrate support included in a semiconductor processing system for processing a substrate. A substrate resting on the substrate support surface is inserted into a processing chamber and processed to produce integrated chips. The substrate support includes a plurality of thermoelectric modules and by controlling the current supply to each of these modules to provide temperature uniformity across the substrate during processing (*See Dhindsa, et al. col.2 lines 35-55*). Thus, Dhindsa, *et al.* relates to maintaining temperature uniformity during production of integrated chips as the substrate support surface bearing the thermoelectric modules is used in the processing chamber. However, as conceded on page 3 of the Final Office Action dated June 16, 2008, Dhindsa, *et al.* does not teach or suggest a specific structure for each thermoelectric structure such as ***helix structure and a spring structure of line pattern*** as recited in independent claim 1. A broad assertion that a plurality of thermoelectric modules can be arranged in any particular manner cannot teach a specific form for an individual thermoelectric structure such as ***helix structure and a spring structure of line pattern*** as recited in the subject claims.

In the Advisory Action, the Examiner argues that Saika discloses that line patterns are denser toward the center and decrease in the density towards outer limits of the structure. However, Saika fails to teach or suggest ***wherein each of the thermo-electrical structures has a structure of line patterns selected from a group comprising: helix structure and a spring structure*** as recited in claim 1.

Therefore, Saika fails to make up for this and for all aforementioned deficiencies of Dhindsa, *et al.* as recited in claim 1 (and similarly claims 7 and 34).

Moreover, independent claims 1 and 7 recite a heat regulating device ***fabricated from a combination of various layers of silicon carbide and diamond***. Neither Dhindsa, *et al.*, nor Saika teach or suggest such aspect.

In view of at least the foregoing, it is respectfully requested that this rejection be withdrawn with respect to independent claims, 1, 7, 34 as well as all claims that depend there from.

Conclusion

The present application is believed to be condition for allowance in view of the amendments and comments herein. A prompt action to such end is earnestly solicited.

In the event any fees are due in connection with this document, the Commissioner is authorized to charge those fees to Deposit Account No. 50-1063 [AMDP812US].

The Examiner is invited to contact applicants' undersigned representative over the telephone to expedite favorable prosecution of the subject application.

Respectfully submitted,
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